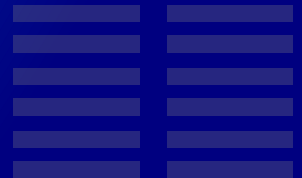


Setting Up a Quiet Itanium-Based Home Office for Fun and Profit

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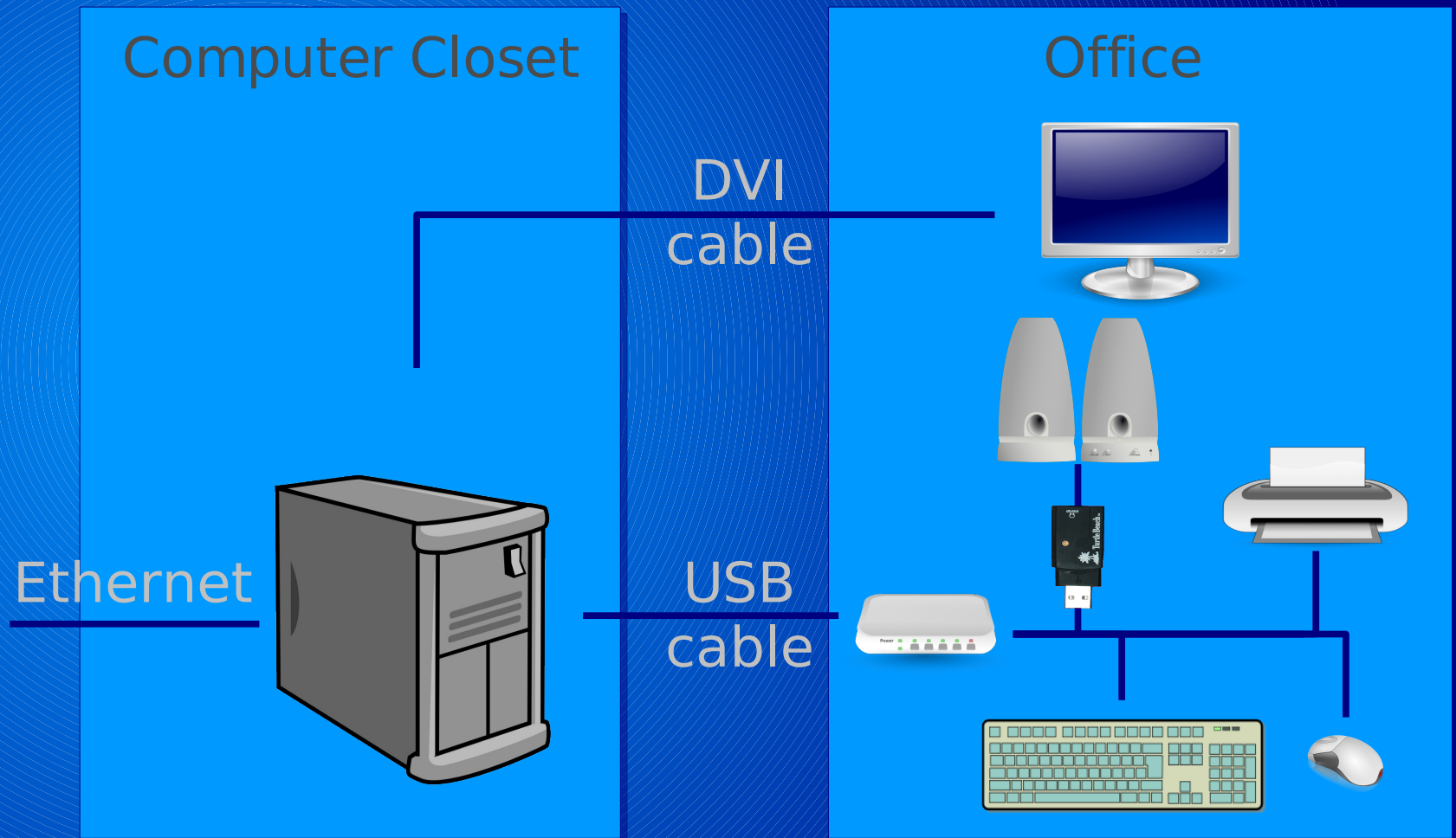
`dmosberger AT gmail.com`



Motivation

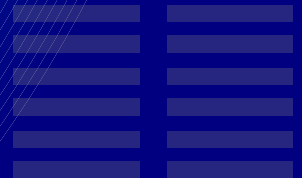
- Corporate offices tend to be over-cooled and noisy
 - One little computer hardly noticeable
- Home offices quite different:
 - Even a computer with a “low-power” CPU (e.g., 80W TDP) generates a fair amount of heat; not to mention dual-Madison 1.6GHz with dual ATI cards...
 - Even if all else is quiet, graphics-card fan is sure to drive you crazy

Oh, I know what to do!



It's Easy, Right?

- Easy, yes, except when your desk is about **40 feet** from the computer closet!
 - USB max cable length: 5m (**16.4'**)
 - DVI max cable length: 5m (**16.4'**)



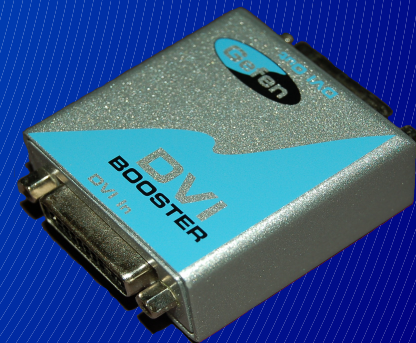
Challenge #1: Getting USB Across

- Self-powered USB cables to the rescue!
 - USB 2.0
 - 16.5' long
 - Around US \$10
 - Each cable has built-in USB 2.0 hub
- **Caution!**
 - Can cascade at most 5 cables, and even that only if there are no other hubs along the way!



Challenge #2: Getting the Video Across

- Lesson #1: Almost anything can be run over Cat5 cables.
 - Only trouble: it's gonna cost you!
 - For example, Gefen DVI-over-Cat5 adapter is about \$500!
- Gefen DVI-booster:
 - Self-powered
 - “Only” about \$180
 - **Catch:** 40' DVI cable is \$206 (!!)



Getting Video across continued....

- Surprise, surprise, save with HDMI!
 - 50' HDMI cable: \$100
 - HDMI/DVI adapters: \$34
 - Gefen HDMI booster: also \$180
 - Total: “only” \$314



Sharing the Video Cables

- Clearly, it's not economical to run a DVI/HDMI cable for each computer
 - Standard solution: use a KVM switch, such as the IOGear GCS1764 (~\$200):



- **Catch:** USB keyboard must be attached directly (no hubs)!
- **Fix:** IOGear USB 1.1-over-Cat5 extender (\$73)

Power Control

- **Problem:**
 - Some machines use substantial power and/or are noisy even when powered down...
- **Solution:**
 - Remote power strip, e.g., Cyberpower CSW8RU (~\$300)
 - 8 HTTP/SNMP controlled 110Vac outlets
 - Built-in temperature & humidity sensors

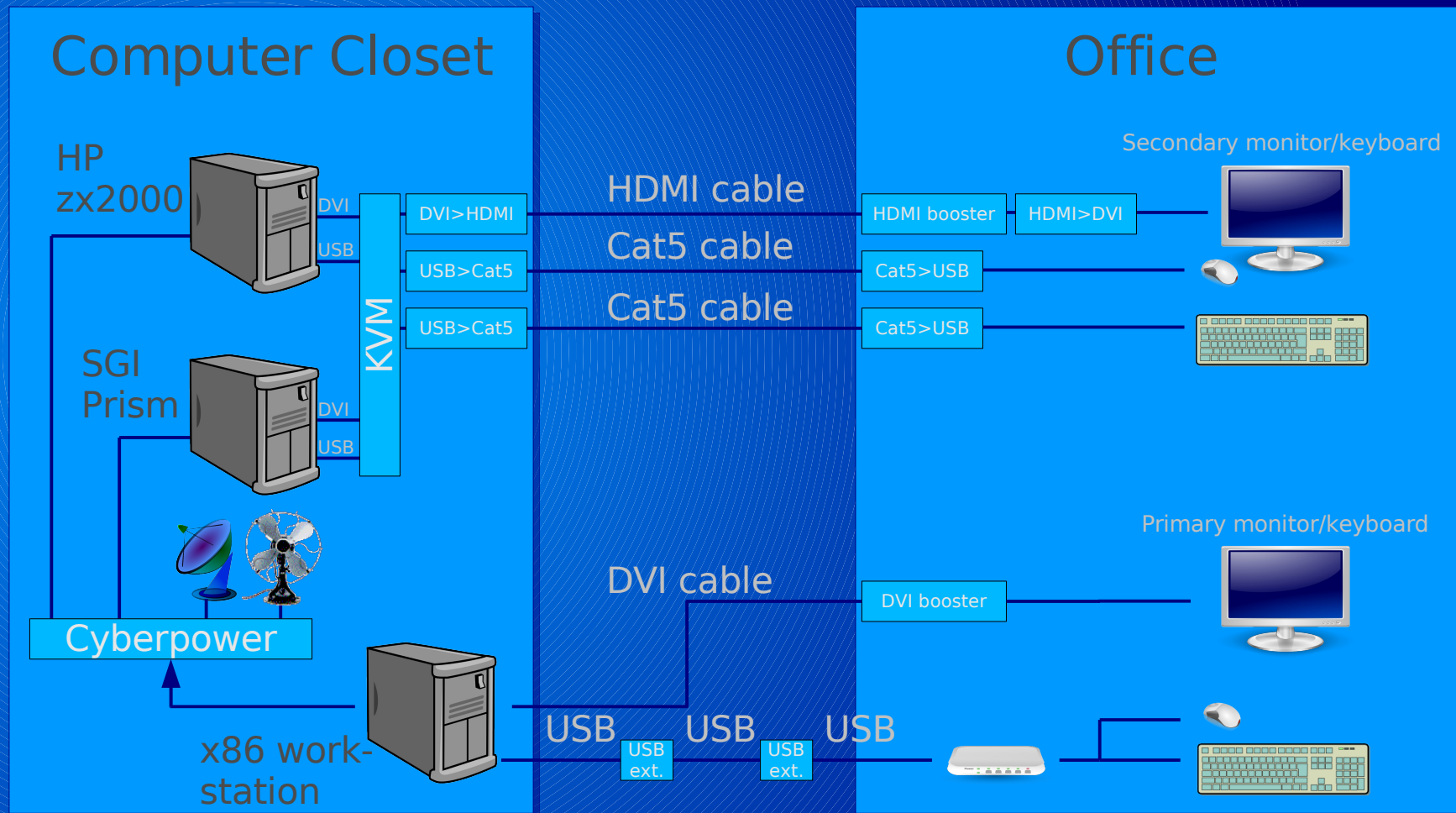


Unexpected Benefits

- Can use a script to turn on closet's cooling fan when hot
 - Forget about SNMP traps, though!
- Can use a script to turn on satellite dish heater for a couple hours whenever it's snowing:

```
if [ $(weather -jKBJC) = "snow" ]; then
    snmpset -v1 cyberswitch \
        eSwitchActOutlet = 64 eSwitchActType = 4
fi
```


Final Configuration



That's all folks!

- Questions?
- Suggestions?
- Catch a flight?

